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| 09/890,670      | 08/03/2001  | Lars Wild            | 64251-033           | 6718             |

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EXAMINER

PENDLETON, BRIAN T

ART UNIT

PAPER NUMBER

2644

DATE MAILED: 10/29/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

# Office Action Summary

Application No.

09/890,670

Applicant(s)

WILD, LARS

Examiner

Brian T. Pendleton

Art Unit

2644

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

## Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

## Status

- 1) ☒ Responsive to communication(s) filed on 03 August 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

## Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-21 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

## Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 03 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

## Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

## Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)  
Paper No(s)/Mail Date 8/3/2001.
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

## DETAILED ACTION

### *Claim Rejections - 35 USC § 103*

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 3, 5, 6, 8, 9, 13, 18 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmid, UK Patent Application GB 2 103 807 A in view of Morris, US Patent 6,544,199. Schmid discloses an apparatus for stopping a sleeping person from snoring comprising microphone 7 (detector for detecting snoring sounds), radio station 15 which transmits a radio frequency signal proportional to the amplitude of snoring sounds to radio receiver 17. The receiver 17 in mobile unit 3 generates a stimulus voltage across electrodes 5, thus Schmid does not disclose that the radio receiver 17 converts the radio signal to an audio signal. Morris discloses a system for modifying behavioral disorders, especially snoring, by sensing the snoring through sensor 105 and transmitting a warning the user via a warning device 120. The warning device 120 emits an audible tone. In alternative embodiment (figures 5 and 6), the sensor and warning device are located in an earplug 510 which detects snoring and issues an audible tone through speaker 615. Thus, it was well known in the art to use a sound-insulating earplug to generate an audible tone to discourage snoring in an individual. It would have been obvious to one of ordinary skill in the art at the time of invention to modify Schmid by using an earplug, as taught Morris, as the mobile unit to convert the radio frequency sounds from the radio station 15 and generate an audio signal which is heard by the user to stop the user from

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snoring which would improve its functionality since the audible tone was designed to be annoying to the user. Per claims 3, 8, 9 and 13, Schmid discloses a microphone 7 as the input mechanism to the radio station 15. As to claim 5, the speaker 615 inherently as a diaphragm. Per claim 6, Morris discloses switches 620 for controlling volume. As to claim 18, Morris teaches that the sensor 105, which represents an input mechanism, can be connected by RF link 115 to processor 110. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to connect the microphone 7 to the radio station 15 via RF for the purpose of wireless coupling which obviates the use of bulky wires. Per claim 21, the microphone 7 of Schmid can pick up any specific sounds.

3. Claims 2, 7, 14-17, 19 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmid in view of Morris as applied to claim 1 above, and further in view of Chang et al, US Patent 5,631,965. The combination of Schmid and Morris does not disclose that the radio signal after conversion represents snoring sounds as an audio signal (which can also be interpreted as converting radio signals to reproduce the sounds identically). Chang discloses a hearing protector earplug comprising a microphone for hearing the external sounds. Thus, it was taught at the time of invention that users having earplugs still need to hear sounds. In the environment of Schmid and Morris, the external sounds would be snoring. Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to reproduce the snoring sounds in the earplug of the combination of Schmid and Morris for the purpose of audibly alerting the sleeper of his/her snoring with the most recognizable sound, the snoring itself. Per claims 14, 15 and 19, Morris discloses processor 110 for recognizing predetermined sounds and it was obvious to transmit those sounds to the user. Regarding claim 16, it was obvious to extend the system to

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a multiple users and having specific characteristic sound patterns to be recognized for each user, as different users have various hearing characteristics.

4. Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Schmid in view of Morris as applied to claim 1 above, and further in view of Falco, US Patent 6,148,821. The combination of Schmid and Morris does not disclose that the earplug is made of a silicone material and that the radio receiver and means for converting radio signals are integrated with the material. Falco discloses a noise attenuating earplug 10 which is composed of silicone rubber (see column 13). It would have been obvious to one of ordinary skill in the art at the time of invention to construct the earplug 510 of the combination of Schmid and Morris of silicone material, per the teachings of Falco, for the purpose of making it easier to fit in the user's ear.

5. Claims 10-12 and 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Schmid in view of Morris as applied to claims 1 and 3 above, and further in view of Lewis, US Patent 6,035,047. The combination of Schmid and Morris does not disclose that the input mechanism is a clock with an alarm function (per claim 10). Lewis discloses a system for blocking unwanted sound and alerting the user while sleeping comprising a remote sound sensor, transmitter, and wireless headset receiver. The sound sensor senses a smoke alarm (per claims 11 and 20) or movement (per claim 12) and notifies the user by generating an audible tone in the ear. Figure 6 illustrates that the transmitter has a clock (which has alarm functionality through the integrated alarms). It would have been obvious to one of ordinary skill in the art at the time of invention to modify the combination of Schmid and Morris to include the clock with alarm function, as taught by Lewis, for the purpose of warning a sleep of potential dangerous situations or waking the user which would be unheard with the use of an earplug.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian T. Pendleton whose telephone number is (703) 305-9509. The examiner can normally be reached on M-F 7-4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Forester W. Isen can be reached on (703) 305-4386. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



btp